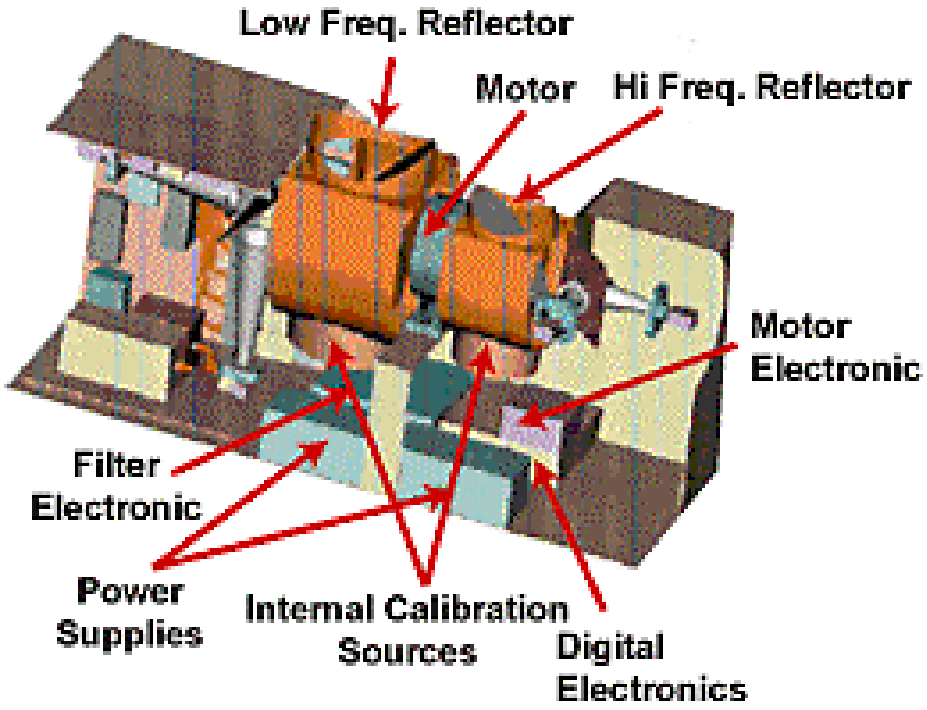
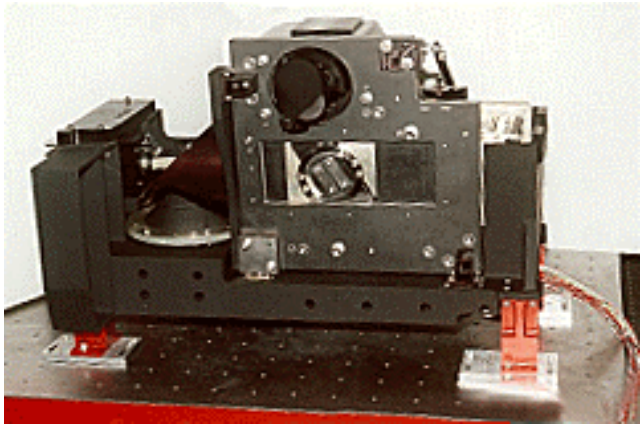
Advanced Technology Microwave Sounder (ATMS)

- ATMS is a step up from its heritage sensors (AMSU-A, AMSU-B)
  - using less power,
  - less mass,
  - smaller volume.



Cross-track Infrared Sounder (CrIS)

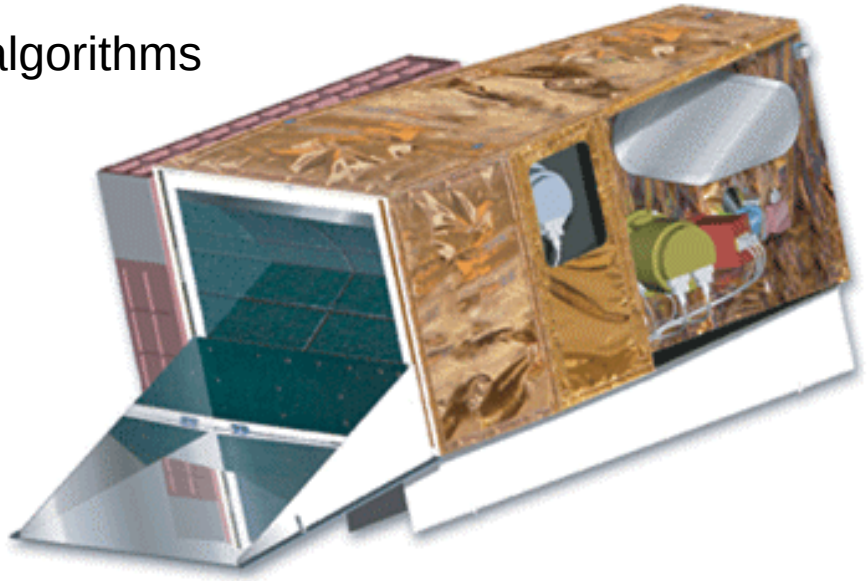
- Michelson interferometer infrared sounder
  - measure scene radiance
  - calculate the vertical distribution of temperature, moisture, and pressure in the Earth's atmosphere
  - Works in unison with the Advanced technology Microwave Sounder (ATMS)



Visible Infrared Imaging Radiometer Suite (VIIRS)

Extends the measurement series now flying as Moderate Resolution Imaging Spectroradiometer (MODIS)

- more bands
- more refined and advanced algorithms



KEY CHARACTERISTICS AND PERFORMANCE
Spectral Bands:
Visible/Near IR: 9 plus Day/Night Pan Band
Mid-Wave IR: 8
Long-Wave IR: 4
Imaging Optics: 19.1 cm Aperture, 114 cm Focal Length
Band-to-Band Registration (Entire Scan) >80% of Sample Area
Orbit Average Power: 133 Watts (44%Margin)
Weight: 200 kg
DATA ACQUISITION PARAMETERS:
Scanned Swath: +/-56 Deg, 3,040 km
Downtrack Swath: 11.87 km, 16 to 32 Detectors in Track
Scan Period: 1.786 Sec.
Horizontal Sample Interval On Ground: <1.6 km @ End of Scan
Data Quantization: 12 Bits - 14 Bit A/D Converters for lower noise
Data Rate (Est. Orbit Average - Actual Rate Varies With Scene):
High-Rate Data (Rice Compression): 5.8 Mbps (27% Margin)

Ozone Mapping and Profiler Suite (OMPS)

- **OMPS Mission Products**
  - The OMPS program will create five ozone products
  - High performance Total Column environmental data records (EDR)
  - Heritage TOMS V7 Total Column EDRs
  - High performance Ozone Profile EDRs
  - Heritage SBUV V6 Nadir Profile data records
  - IR Total Column data records from Cross-track Infra-red Sounder (CRIS) radiances